

We claim:

1. An aqueous pigment formulation comprising
 - (A) at least one organic and/or inorganic pigment,
 - 5 (B) at least one polyethylene glycol alkyl ether functionalized with a terminal acid group,
 - (C) at least one alkoxylated styrene-phenol condensate,
 - (D) at least one polyethylene glycol ether having an average molar mass between 200 and 1000 g/mol,
 - 10 (E) at least one alkynediol,
 - (F) fats and oils of vegetable and/or animal origin and/or saturated and unsaturated higher fatty acids of such fats and oils and/or salts of such saturated and unsaturated higher fatty acids,
 - (G) if appropriate an aqueous acrylate resin solution,
 - 15 (H) if appropriate a polymeric condensation product of aromatic sulfonic acids and formaldehyde and/or of the salts of aromatic sulfonic acids and formaldehyde,
 - (I) if appropriate a sulfosuccinic monoester of a castor oil alkoxylate,
 - (J) if appropriate a hydrotropic substance,
 - 20 (K) if appropriate further add materials customary for aqueous pigment formulations, and
 - (L) water.
-
2. The pigment formulation according to claim 1 comprising essentially
 - 25 (A) 5% to 80% by weight of at least one organic and/or inorganic pigment,
 - (B) 0.1% to 30% by weight of at least one polyethylene glycol alkyl ether functionalized with a terminal acid group,
 - (C) 0.1% to 30% by weight of at least one alkoxylated styrene-phenol condensate,
 - 30 (D) 0.5% to 50% by weight of at least one polyethylene glycol ether having an average molar mass between 200 and 1000 g/mol,
 - (E) 0.1% to 5% by weight of at least one alkynediol,
 - (F) 0.1% to 10% by weight of fats and oils of vegetable and/or animal origin

and/or saturated and unsaturated higher fatty acids of such fats and oils and/or salts of such saturated and unsaturated higher fatty acids,

- (G) 0% to 30% by weight of an aqueous acrylate resin solution;
 - (H) 0% to 10% by weight of a polymeric condensation product of aromatic sulfonic acids and formaldehyde and/or of the salts of aromatic sulfonic acids and formaldehyde,
 - 5 (I) 0% to 10% by weight of a sulfosuccinic monoester of a castor oil alkoxylate,
 - (J) 0% to 30% by weight of a hydrotropic substance,
 - (K) 0% to 10% by weight of further add materials customary for aqueous 10 pigment formulations, and
 - (L) 5% to 90% by weight of water,
- all based on the total weight of the pigment formulation.

3. The pigment formulation according to claim 1 or 2 comprising essentially

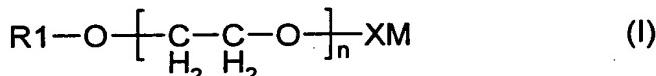
- 15 (A) 20% to 70% by weight of at least one organic and/or inorganic pigment,
- (B) 1% to 15% by weight of at least one polyethylene glycol alkyl ether functionalized with a terminal acid group,
- (C) 1% to 15% by weight of at least one alkoxyLATED styrene-phenol condensate,
- 20 (D) 1% to 20% by weight of at least one polyethylene glycol ether having an average molar mass between 200 and 1000 g/mol,
- (E) 0.1% to 2% by weight of at least one alkynediol,
- (F) 0.1% to 5% by weight of fats and oils of vegetable and/or animal origin and/or saturated and unsaturated higher fatty acids of such fats and oils
- 25 and/or salts of such saturated and unsaturated higher fatty acids,
- (G) 0% to 25% by weight of an aqueous acrylate resin solution,
- (H) 0% to 5% by weight of a polymeric condensation product of aromatic sulfonic acids and formaldehyde and/or of the salts of aromatic sulfonic acids and formaldehyde,
- 30 (I) 0% to 8% by weight of a sulfosuccinic monoester of a castor oil ethoxylate,
- (J) 0% to 20% by weight of a hydrotropic substance,
- (K) 0% to 5% by weight of further add materials customary for aqueous pigment formulations, and

(L) 10% to 70% by weight of water,
all based on the total weight of the pigment formulation.

4. The pigment formulation according to one or more of claims 1 to 3 wherein
5 said organic pigment (A) is at least one pigment from the group of the monoazo,
disazo, laked azo, β -naphthol, Naphthol AS, benzimidazolone, disazo
condensation, azo metal complex, phthalocyanine, quinacridone, perylene,
perinone, thioindigo, anthanthrone, anthraquinone, flavanthrone, indanthrone,
isoviolanthrone, pyranthrone, dioxazine, quinophthalone, isoindoline, isoindolinone
10 or diketopyrrolopyrrole pigments or an acidic to alkaline carbon black from the
group of the furnace blacks or lamp blacks, or a combination thereof.

15 5. The pigment formulation according to one or more of claims 1 to 4 wherein
the organic pigment is combined with carbon black or titanium dioxide.

6. The pigment formulation according to one or more of claims 1 to 5 wherein
said polyethylene glycol alkyl ether (B) functionalized with a terminal acid group
corresponds to a compound of the formula (I):



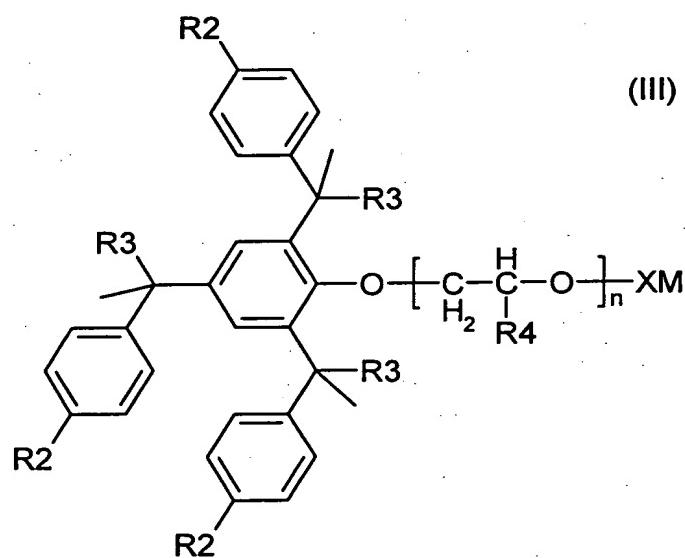
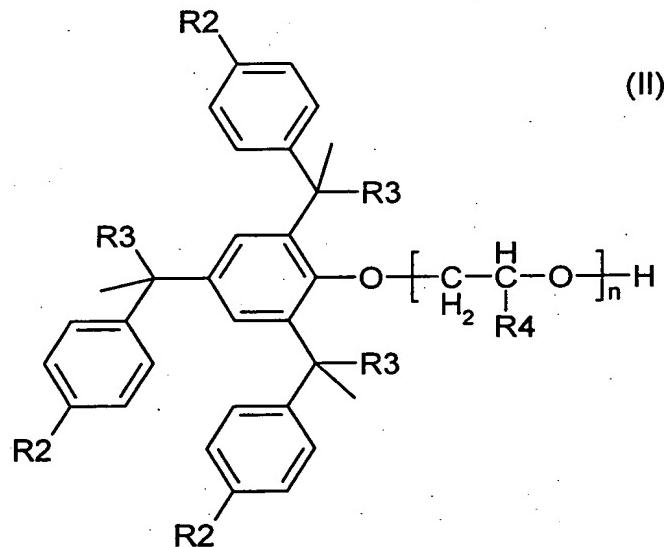
20

where

- R^1 is a substituted or unsubstituted, branched or unbranched $\text{C}_1\text{-C}_{20}$ -alkyl or
 $\text{C}_3\text{-C}_{20}$ -cycloalkyl radical or a substituted or unsubstituted, branched or
25 unbranched $\text{C}_2\text{-C}_{20}$ -alkenyl or $\text{C}_3\text{-C}_{20}$ -cycloalkenyl radical, the substituents
being 1, 2, 3 or 4 radicals in the group consisting of halogen, aryl,
aryl($\text{C}_1\text{-C}_{20}$)alkyl, $\text{C}_5\text{-C}_6$ -cycloalkyl, hetaryl, hetaryl($\text{C}_1\text{-C}_{20}$)alkyl and
 $\text{C}_1\text{-C}_{20}$ -alkoxy,
- n is a number from 1 to 100,
- 30 X is SO_3^- , SO_2^- , CH_2COO^- , PO_3^{2-} or PO_3M^- , and
- M is H, a monovalent metal cation, a divalent metal cation, NH_4^+ , a secondary,
tertiary or quaternary ammonium ion, or a combination thereof.

7. The pigment formulation according to one or more of claims 1 to 6 wherein said alkoxylated styrene-phenol condensate (C) corresponds to a compound of the formula (II) or (III) or a mixture thereof:

5



10

where

R² is H, a branched or unbranched C₁-C₂₀-alkyl or C₃-C₂₀-cycloalkyl radical or a branched or unbranched C₂-C₂₀-alkenyl or C₃-C₂₀-cycloalkenyl radical,

R^3 and R^4 are independently H, a branched or unbranched C₁-C₂₀-alkyl or C₃-C₂₀-cycloalkyl radical or a branched or unbranched C₂-C₂₀-alkenyl or C₃-C₂₀-cycloalkenyl radical,

n is a number from 1 to 100,

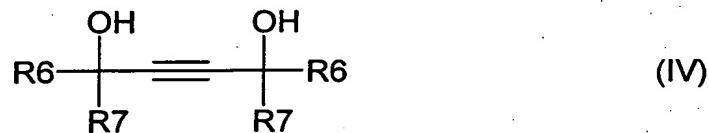
5 X is CO-R⁵-COO⁻, SO₃⁻, SO₂⁻, PO₃²⁻ or PO₃M⁻,

R⁵ is a substituted or unsubstituted, branched or unbranched C₁-C₂₀-alkylene radical, a substituted or unsubstituted, branched or unbranched C₂-C₂₀-alkenylene radical, or a substituted or unsubstituted arylene radical, the substituents preferably being 1, 2, 3 or 4 radicals from the group

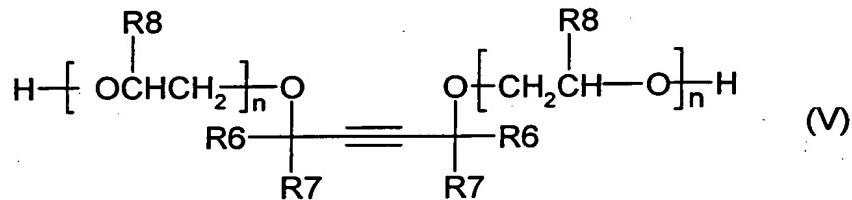
10 consisting of halogen, hydroxyl, C₁-C₄-alkoxy, nitro, cyano, carboxyl, amino and sulfo, and

M is H, a monovalent metal cation, a divalent metal cation, NH₄⁺, a secondary, tertiary or quaternary ammonium ion.

15 8. The pigment formulation according to one or more of claims 1 to 7 wherein said alkynediol (E) corresponds to a compound of the formula (IV) or (V) or a mixture thereof:



20



where

25 R⁶ is H or a branched or unbranched C₁-C₄-alkyl radical or a branched or unbranched C₂-C₄-alkenyl radical,

R⁷ is a branched or unbranched C₃-C₂₀-alkyl or C₃-C₂₀-cycloalkyl radical or a branched or unbranched C₃-C₂₀-alkenyl or C₃-C₂₀-cycloalkenyl radical,

R⁸ is H, a branched or unbranched C₁-C₂₀-alkyl or C₃-C₂₀-cycloalkyl radical or a branched or unbranched C₂-C₂₀-alkenyl or C₃-C₂₀-cycloalkenyl radical,
n is a number from 1 to 100.

5 9. The pigment formulation according to one or more of claims 1 to 8 wherein said component (F) corresponds to a compound of the formula (VI) or a mixture thereof:



10 where

R⁹ is a branched or unbranched C₇-C₂₉-alkyl or a branched or unbranched C₇-C₂₉-alkenyl radical, a branched or unbranched C₇-C₂₉-alkadienyl radical, a branched or unbranched C₇-C₂₉-alkatrienyl radical, and

15 M is H, a monovalent metal cation, NH₄⁺, a secondary, tertiary or quaternary ammonium ion,

or a fat or oil from the group consisting of tallow, palm kernel fat, coco fat, rapeseed oil, sunflower oil, linseed oil, palm oil, soya oil, peanut oil and whale oil.

20 10. A process for producing a pigment formulation according to one or more of claims 1 to 9, which comprises said component (A) together with said components (B), (C), (D), (E), (F) and if appropriate (G), (H), (I), (J) and (K) being incipiently pasted and homogenized in water (component L) and finely dispersed or finely dissipated with the aid of a grinding or dispersing assembly.

25 11. The use of a pigment formulation according to one or more of claims 1 to 9 for pigmenting natural or synthetic materials.

12. The use according to claim 11 for pigmenting natural and synthetic fiber materials, preferably cellulose fibers, especially for paper pulp coloration and
30 laminate coloration.

13. The use according to claim 11 for pigmentation or production of waterborne printing inks, ink jet inks, electrophotographic toners, powder coatings, color filters,

electronic inks and "electronic paper", painting and emulsion colors, emulsion paintings, solventborne printing inks, wallpaper colors, water-thinnable paintings, wood preservation systems, viscose dope dyeing, sausage casings, seed, fertilizers, glass bottles, and also for mass coloration of roof shingles, for coloring 5 renders, woodstains, colored pencil leads, felttip pens, waxes, paraffins, graphics inks, ballpoint pen pastes, chalks, washing and cleaning compositions, shoe care agents, latex products, abrasives and also for coloring plastics.